

Practice Assignment

1. You are offered two different summer jobs and you need to decide which one will pay the most money. The first job, a camp counselor position, pays \$200 up front in addition to \$7.50 per hour. The second job, a cashier position at a sporting goods store, pays \$10 per hour.

a. Create an equation to represent the camp counselor position.  $y = 7.50x + 200$

b. Create an equation to represent the cashier position.  $y = 10x$

2. When will the two positions pay the same amount of money? How much money will that be? Show your work algebraically.

$$7.50x + 200 = 10x$$

$$200 = 2.50x$$

$$x = 80$$

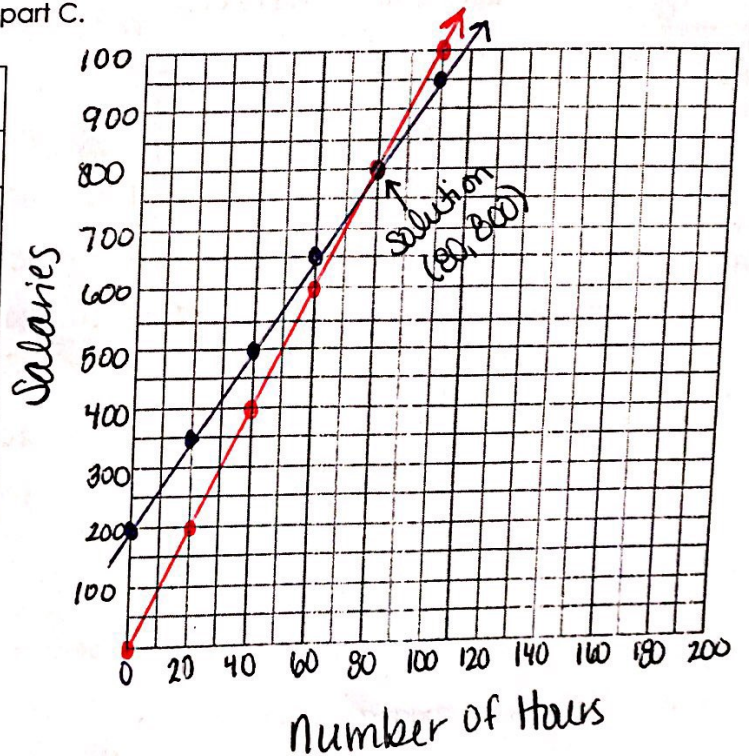
$$y = 10(80)$$

$$y = 800$$

If they work 80 hours, they will make \$800 at both positions.

3. Complete the table below and then create a graph of the salaries of the two positions. Confirm the solution in the table and on the graph with your answer in part C.

Number of Hours	Counselor Salary	Cashier Salary
0	200	0
20	350	200
40	500	400
60	650	600
80	800	800
100	950	1000
120	1100	1200



4. When is the camp counselor position the better option for making more money?

If they work less than 80 hours

5. When is the cashier position the better option for making more money?

If they work more than 80 hours



2. Southland Cellular Phone Company offers two different cell phone plans:

- Plan A: \$50 for the phone and \$6 for each gig of data
- Plan B: \$30 for the phone and \$11 for each gig of data

a. Create an equation to represent Plan A.  $y = 6x + 50$

b. Create an equation to represent Plan B.  $y = 11x + 30$

2. When will the two plans cost the same amount of money? How much money will that be? Show your work algebraically.

$$\begin{array}{r} 6x + 50 = 11x + 30 \\ -30 \quad -30 \\ \hline 6x + 20 = 11x \\ -6x \quad -6x \\ \hline 20 = 5x \\ x = 4 \end{array}$$

$$y = 6(4) + 50$$

$$y = 74$$

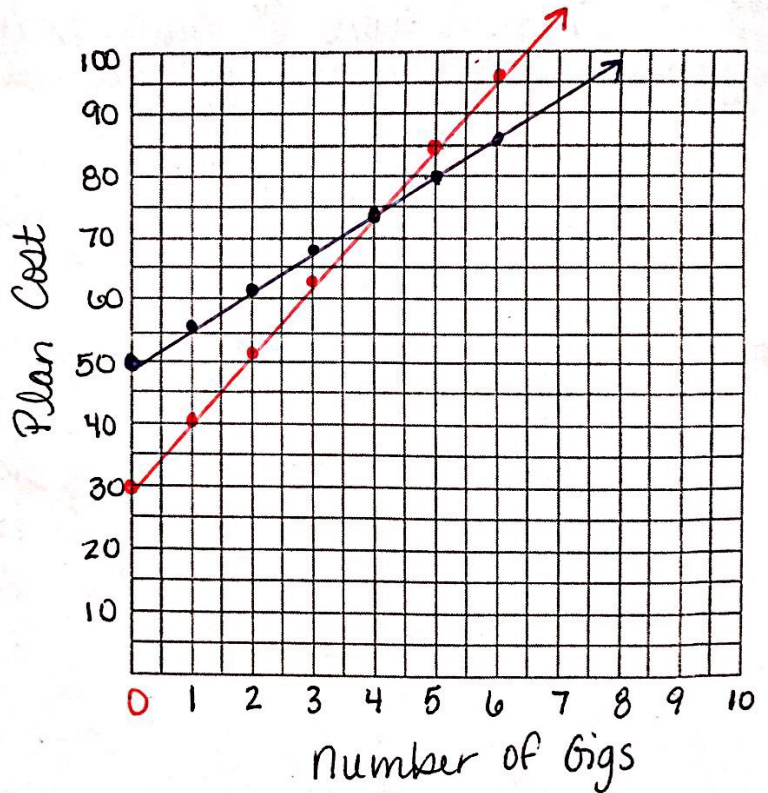
If you use 4 gigs of data, both plans will cost \$74.

3. Complete the table below and then create a graph of the costs of the two plans. Confirm the solution in the table and on the graph with your answer in part C.

Number of Gigs	Plan A Cost	Plan B Cost
0	50	30
1	56	41
2	62	52
3	68	63
4	74	74
5	80	85
6	86	96

cheaper

cheaper



4. When is Plan A the cheaper option?

If you use more than 4 gigs of data

5. When is Plan B the cheaper option?

If you use less than 4 gigs of data